

America's Aging Farmers Who Will Take Their Place?

Few young people are entering farming. If new young farmers do not step forward to replace older retiring farmers, ownership of land and other farm assets may be concentrated into fewer, ever-larger operations. Larger farms are more likely to purchase inputs, obtain credit, and market their products outside the local community. A decline in farm population could also threaten the viability of rural retail businesses and handicap rural social organizations, schools, and churches.

COMMON perceptions of the "graying" of America's farmers were seemingly confirmed by Census of Agriculture data that showed an increase in average age of farm operators from 50.5 to 52 years between 1982 and 1987, a decline in the number of farmers under age 25 from 62,336 to 35,851, and an increase in the number 65 or over from 400,000 to 447,000. In 1987, more than 21 percent of all farmers were 65 or over. By comparison, only 3 percent of the total U.S. labor force is 65 or over. Self-employed workers tend to retire later than others, but even compared with self-employed workers (9 percent of whom are at least 65), farming has a large proportion of older persons.

In this article, I examine how trends over the last decade fit in with long-term trends, how demographic and economic influences can be expected to interact to shape the future characteristics of American farmers, and how that will affect rural America.

Aging Farmers Not a New Concern

The trend toward older farmers began in the 1950's. The rapid off-farm migration of the 1950's left a relatively small number of young farmers and a large older cohort who had begun farming before the off-farm exodus began. Hence, the average age of farmers in the Census of Agriculture rose steadily from 46.5 in 1940 to 51.7 in 1974, slightly less than 1987's average 52.0. Between 1964 and 1974 there were about 14 farmers 65 and over for every 10 farm operators under 35, compared with a ratio of 16 to 10 in 1987 (fig. 1).

Concerns about aging farmers were temporarily allayed by an unusual influx of young farmers in the 1970's, due to a combination of farm sector prosperity,

maturing of the "baby boom" cohort, and greater preference for rural living. The average age dropped between 1974 and 1978 from 51.7 to 50.3 before rising from 50.5 to 52 between 1982 and 1987. With the onset of the farm financial crisis in the 1980's, potential new young entrants were discouraged by bleak financial prospects and scarce farm credit.

The most noticeable trend over the past several decades has been a steady decline in the number of middle-aged farmers. The number of farm operators 35-64 years old fell from 3.2 million in 1954 to under 1.4 million in 1987. The number of young and older farmers has been more steady. The result is that farmers are more evenly distributed across age groups than they were in 1954. Changes in all age groups during

Figure 1
Farm numbers by operator age and average age of operator, 1954-87

As the number of farms declined during the 1950's and 1960's, the number of younger farmers also fell, increasing the average age of farm operators

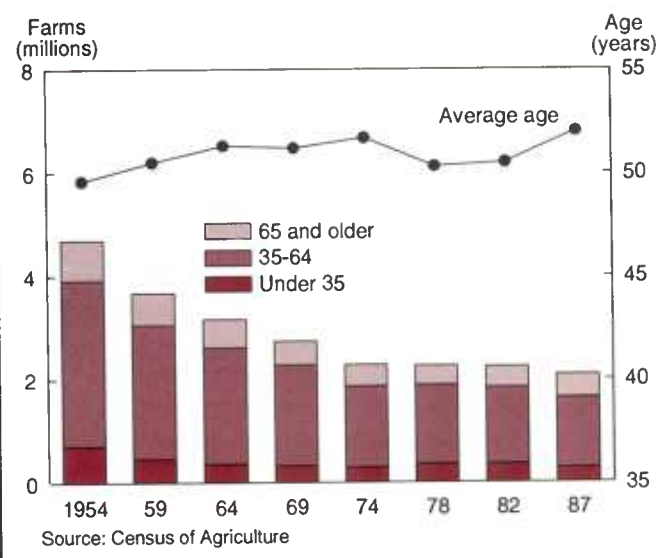


Table 1

Estimated net entry and exit of farms by age of operator, 1950-87¹

The loss of millions of farms during the 1950's and 1960's resulted from low entry by young farmers compared with the huge numbers of middle-age and older farmers who were leaving.

Years	Age of operator			Total change
	Under 35	35-54	55-older	
Thousand farms				
1950-54	157	-94	-515	-452
1954-59 ²	121	-412	-734	-1,025
1959-64	190	-185	-519	-514
1964-69	144	-123	-502	-481
1969-74	144	-145	-450	-451
1974-78 ²	217	77	-374	-80
1978-82	168	20	-261	-73
1982-87	115	-27	-241	-153

¹Numbers shown are changes in farm numbers between census years for age cohorts. For example, the difference between the number of under 35 farms in 1954 and the number of under 40 farms in 1959 is the net entry of under 35 farmers during 1954-59. Number of farmers by age were obtained from Census of Agriculture tabulations, which were interpolated using a method described by Matthew Smith in "Entry, Exit, and the Age Distribution of Farm Operators, 1974-82," *Journal of Agricultural Economics Research*, Fall 1987, pp. 2-11.

²Change in the definition of a farm between censuses resulted in fewer small farms being counted. This inflates the net exit numbers for these years.

recent years have been small in comparison with changes during the 1950's and 1960's. More recent Current Population Survey (CPS) data show continued decline in the number of under-35 farmers and farm managers between 1987 and 1990, and a fairly constant number of farmers 65 and over.

Fluctuating Entry Shapes the Age Distribution of Farmers

Adjustments in farm numbers take place primarily through changes in entry, which responds to earnings prospects and entry costs in farming compared with other occupations. In earlier decades, off-farm migration was common for farm families, but today exit is driven primarily through normal attrition of older farmers. Entry is concentrated among young people, and is more responsive to economic conditions than is exit. Young people contemplating a career choice have more flexibility in responding to economic conditions than older people. All people, no matter what their occupation, become less likely to change jobs as they grow older. This means that when farm prospects are gloomy, farming tends to become "grayer" as fewer young people enter. When young people are attracted to farming, the profession becomes younger.

The rapid decline in farm numbers of the 1950's and 1960's resulted when low entry by young farmers could not offset attrition by huge numbers of older farmers and considerable off-farm migration at all

under 55, and the departure of those over 55 slowed considerably. In more recent years fewer 35-54 year old operators have been leaving farming, so that the balance of new young entrants against retirements becomes the critical factor in determining the decline in farm numbers.

Reduced entry of young farmers was responsible for the faster decline in number of farms between 1982 and 1987 versus 1978-82 (fig. 2). Much attention was given to farm exits during the 1980's, but overall, exits seem to have been stable between 1978-82 and 1982-87. The effects of financial stress likely fell disproportionately on younger farmers. Younger farmers are more highly leveraged than older farmers, and many who entered during the boom years of the late 1970's borrowed heavily to purchase land at high prices. When land values fell, younger farmers encountered the greatest financial problems servicing debts at the high interest rates prevailing at the time. This is reflected by a noticeable increase in exits for 35-44 year old farmers. However, forced exits were a small proportion of the total number of farm exits in the 1980's.

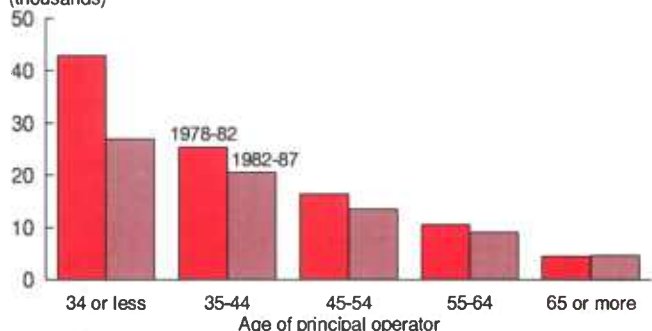
The number of older operators leaving farming has declined over the past two decades. There are fewer older farmers than in the past and they have been leaving farming at a slower rate. The net exit rate for farmers 55 or older fell from an average of 45-50 percent between censuses during 1954-74 to about 30-35 percent during 1978-87. Mechanization and improve-

ages. From 1950 to 1969, 502,000-734,000 farmers age 55 and over left farming every 5 years, to be replaced by only 121,000-190,000 new farmers under 35 years old (table 1). Net exits of 35-54 year old farmers also reduced the number of farms. Consequently, farm numbers declined by 100,-000-200,000 per year. Between 1974 and 1982 entry rose in both age groups

Figure 2
Entry and exit of farms by age of principal operator, 1978-87

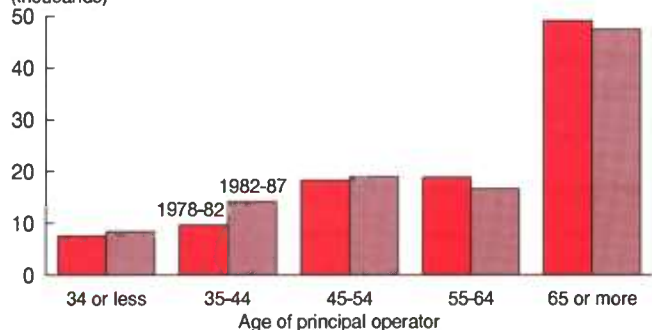
Entry of young farmers declined substantially...

Entering farms per year
(thousands)



...while exits changed little

Exiting farms per year
(thousands)



ments in health may allow farmers to remain active in farming until more advanced ages than in the past. The fall in land values during the 1980's dramatically reduced the net worth of farmers and may have caused older farmers to postpone retirement during those years.

Based on the 1987 age distribution and exit rates during 1978-87, net exits by farmers 55 and older should continue at a steady rate of about 48,000 per year through the 1990's. Net entry of farmers 35-54 years old should be small, and it is unlikely that net entry of those under 35 years would exceed 15,000 per year. Consequently, farm numbers should continue to decline from the current 2 million to about 1.75 million by the year 2002.

Entry Will Remain Low

Although the overall income and financial situations of U.S. farms have improved during the past several years, entry of young farmers will likely remain low due to the poorer longrun prospects for farm careers compared with other occupations. The Bureau of Labor Statistics projects a decline of 224,000 self-employed farmers between 1990 and 2005. Young people are responding by choosing other occupations,

as indicated by declining enrollment in agricultural courses of study and falling membership in farm-oriented youth organizations.

Traditionally, farm entrants have been drawn from the pool of young people who were raised on farms. The shrinking of this pool, due to past declines in farm birth rates and off-farm migration, is another factor contributing to low farm entry. The pool of potential farm entrants may shrink by 20-30 percent between 1992 and 1997.

Although farm production will likely continue to grow at a modest pace, fewer farm operators will be needed to produce any given amount of food and fiber. The large number of farmers who are 65 or over can be adequately replaced with a smaller number of new young farmers, because older farmers generally have smaller farms and produce less than younger farmers. Farmers 65 and over had an average farm size of 520 acres and sales of \$49,500 in 1987, compared with 800 acres and \$144,000 for farmers aged 35-54 (comparing only those whose principal occupation was farming). Many older farmers probably operate small-scale farms because they are partially retired. Older farmers may also be less productive due to lower education levels and lower adoption rates of new technologies. In 1990, 44.3 percent of farmers 65 years and older had not completed high school, compared with 12 percent of those 25-34 years old. Only 22 percent of 65 and older farmers had post-high school education, compared with 40 percent of 25-34 year old farmers.

Some Communities May Face Adjustments

The land of retiring farmers will be absorbed into the farms of established neighboring farms or diverted to nonfarm uses if there are few beginning farmers to buy or rent it. Of course, this means a continuation of the trend toward fewer and larger farms, a trend believed by many to have adverse effects on rural communities. However, while farming is the dominant form of land use, it is not the main source of economic activity in most rural communities. Only about a fifth of non-metro counties are classified as "farm-dependent" (at least 20 percent of labor and proprietors' income derived from farming). Most nonmetro counties are more dependent on manufacturing and services industries for employment and income.

Farm-dependent counties are concentrated in western Minnesota and Iowa, and the Great Plains, where entry of young farmers has been the strongest and average farmer age is the lowest in the Nation (about 49 years). The decline in farm numbers has been slower in these regions than in the Midwest and South. The trends toward older farmers and fewer farms are slower in these farm-dependent areas, but the effects of the

trends are more noticeable since farming plays a more important role in the local economy and social structure. The consolidation of farms into fewer but larger operations appears to be most rapid in the Midwest and South where the availability of nonfarm opportunities has drawn many young people into other careers.

The highest average farmer ages (about 54 years) are found in Appalachia and parts of the Deep South. In these areas, farms are generally small and unprofitable, and young persons often migrate to take advantage of employment opportunities in Sun Belt cities. The economies of rural communities in these areas are usually based on manufacturing or mining, while farming plays a relatively small role.

For the most part, a high average age of farmers reflects poor farming opportunities relative to nonfarm opportunities. But in the West, Northeast, and places adjacent to urban areas, entry of older operators, primarily people who move to farms after retirement from another job, has boosted the average farmer age. In many rural areas, the farm sector is more dependent on the nonfarm sector (for off-farm income) than vice-versa.

Can Public Policies Stop the Trend?

A number of policymakers and farm advocates have pushed for government programs to help beginning farmers get established. The Agricultural Credit Improvement Act (HR 4906) that passed the House of Representatives in August 1992 offers low-interest or guaranteed operating loans through the Farmers Home Administration to beginning farmers with fewer than 5 years of experience and offers a downpayment loan program for the purchase of farmland. The bill requires that a farmer "graduate" to commercial credit within 10 years. The bill redirects FmHA resources away from struggling experienced farmers who are chronically dependent on government aid to beginning farmers who show potential for success in farming.

Such credit subsidies for beginning farmers may be a more cost-effective way to achieve the goal of preserving the institution of the family-owned and -operated farm than the current array of production subsidies and market interventions that benefit all farmers, but attention should also be given to how existing policies work against beginning farmers. Many farm programs favor large producers, because program payments are tied to production. Farm subsidies also tend to drive up the price of farmland, making it more difficult for new farmers to enter. Production quotas, largely owned by elderly persons, present another kind of barrier to entry for young farmers.



USDA/Economics Management Staff

Taxation of capital gains based on inflationary dollars may discourage older farmers from retiring. While the price of farmland has risen steadily with inflation, farmland values in real terms are nearly equal to levels of the 1960's in many areas. An older farm operator who sells land purchased 20-30 years earlier faces the prospect of large capital gains taxes. This provides incentives for aging farmers to hold on to their land until death, and consequently restricts the amount of land available for new farmers to purchase. Estate taxes often prevent the passing of family farms intact to a younger generation. A family-operated farm can be worth \$1 million or more, so a farmer's heirs often have to liquidate farm assets to pay inheritance taxes.

Government programs for beginning farmers will help some individuals, but will probably not reverse current trends. For most people, the choice not to enter farming is made because prospective lifetime earnings in farming are lower than earnings in other occupations, and beginning-farmer credit subsidies would not change this fact. Beginning-farmer subsidies were in place in a number of States throughout the 1980's, and made little difference in attracting more entrants. An estimated 3,500 farmers have received subsidized loans totaling nearly \$400 million since 1980. This is but a small fraction of the total number of beginning farmers. An estimated 27,000 farms operated by farmers under 35 years old began operations each year during that period.

A More Efficient Industry Structure?

Changes in farm entry have in the past been a sign that the farm sector is making adjustments to improve

its competitiveness. Reduced entry could be a sign that the sector is moving away from the dominant single owner-operator organization toward more complex forms of organization where the ownership and operating functions are separated and specialized and where more than one person is involved in the management of the farm. The large farms common in many types of farming today are difficult for a single person or family to manage alone, especially if the operator is a young person just starting in the business or an older person winding down his/her career. Farming is one of the only capital-intensive industries where most firms are still organized as sole proprietorships. In some segments of the farm sector, such as poultry and vegetable production, new management and financing arrangements have become common. Farms have organized as corporations, taken on managerial employees who work for salary, and integrated with food-processing companies that have a say in the management of the farm.

As farm management becomes more complex in an increasingly dynamic farm sector that features biotechnology, increasing integration in global markets, and more complex marketing channels, farm resources may be managed more efficiently by larger organizations that allow specialization and pooling of resources and can respond more rapidly to changes in volatile world markets. Falling entry rates may be a signal that the commercial farm sector is shifting away from the "one-man, one-farm" ideal cherished by many to a more complex structure that will satisfy consumer wants at low prices and maintain competitiveness in world markets.

The economic and social structure of most rural communities will be affected more by the growth or decline of nonfarm industries than by the changing structure of farming. Still, some rural communities will doubtless face difficult adjustments to the continually changing structure of farming, as they have for the last several decades. Improved efficiency in the farm sector will ensure that the standard of living for Americans as a whole is maintained at a high level by keeping food prices low for consumers and U.S. farm products competitive on world markets.

For Additional Reading...

Fred Gale and David Henderson, *Estimating Entry and Exit of U.S. Farms, 1978-87*, AGES-9119, U.S. Dept. of Agr., Econ. Res. Serv., March 1991.

Fred Gale, "Why Did the Number of Young Farm Entrants Decline?" *American Journal of Agricultural Economics*, vol. 75, no. 1, Feb. 1993, pp. 138-46.

Fred Gale, "What's Behind the Declining Farm Count?" *Agricultural Outlook*, AO-186, U.S. Dept. of Agr., Econ. Res. Serv., June 1992, pp. 26-8.

Farmer Age Depends on Farmer Definition and Data Source

The often-cited average age reported in the Census of Agriculture overstates slightly the age of the farm operator population compared with other data sources based on different concepts for defining who is a farmer. For example, the Census of Agriculture showed an average age of 52 in 1987, compared with a median age of 49 for people employed as a farmer or farm manager from the Current Population Survey.

The definition of who is a farmer is not clear, since today many farm operators do not live on their farms, and many people who do live on farms do not depend on farming to earn a living. The Census of Agriculture counts one operator for each place that meets the criterion for being a farm (sells \$1,000 or more of agricultural products), while the Current Population Survey (CPS) counts all people employed full time as farmers or farm managers. The CPS counts more young farmers than the Census, and the Census counts more older farmers, while the number of middle-aged farmers is comparable for the two data sources.

Young farmers in parent-child partnerships are not counted in the Census of Agriculture. For farms operated by partners, the oldest partner is usually counted as the principal operator. About 12 percent of U.S. farms are organized as partnerships. In 1987, the CPS reported 64,000 people under 25 years old employed as farmers or farm managers, while the Census reported only 35,851 farms operated by people under 25 years of age.

The Census of Agriculture also counts twice as many farmers age 65 and older (447,341 in 1987) compared with the CPS measure of employment as a farmer or farm manager (213,000 in 1987). Even when only farm operators whose principal occupation is farming are counted, the number of old farmers in the Census is much larger than the number in the CPS. The surplus of old operators in the Census is probably due to the presence of people living on and operating small farms who are not counted in the employment survey because they are technically out of the labor force (not working at the time of the survey).

Other estimates count farm people based on different definitions, including the number of people living on farms and the number receiving farm income. In this article, I focus on the data from the Censuses of Agriculture since they are the most commonly used, but the reader should be aware that there are various measures of the number of farmers that may give apparently conflicting estimates due to differences in the concepts underlying the estimates.